

WHAT IS CLAIMED IS:

1. A graphical user interface for managing a plurality of system components within a controlled environment, comprising:

a first set of control objects, wherein said control objects are associated with system components within the controlled environment; and

a component control interface for presenting control options for a selected system component, wherein activation of a control object from said first set denotes said selected system component and populates the user interface with said control options, wherein each control option is associated with a sequence of commands that, when executed, sends instructions to control the operations or functions of said selected system component.

2. The graphical user interface of claim 1, further comprising:

a second set of control objects representing affiliate system components capable of providing an input to said selected system component, wherein activation of a control object from said second set populates the user interface with control options for an affiliate system component associated with the activated control object, wherein each control option for said affiliate system component is associated with a sequence of commands that, when executed, sends instructions to control the operations or functions of said affiliate system component.

3. The graphical user interface of claim 1, wherein said first set of control objects represents a plurality of regions within the controlled environment, wherein each region includes one or more system components.

4. The graphical user interface of claim 3, further comprising:

a second set of control objects representing available system components within a selected region, wherein activation of a control object from said first set denotes said selected region and populates the user interface

with said second set, wherein activation of a control object from said second set denotes said selected system component and populates the user interface with said control options.

5. The graphical user interface of claim 1, wherein said first set of control objects represents a plurality of component types within the controlled environment.

6. The graphical user interface of claim 5, further comprising:
a second set of control objects representing available regions within the controlled environment, wherein each region includes one or more system components of a selected component type, wherein activation of a control object from said first set denotes said selected component type and populates the user interface with said second set, wherein activation of a control object from said second set denotes said selected system component and populates the user interface with said control options.

7. The graphical user interface of claim 1, further comprising:
a switch object associated with a global command that, when executed, sends instructions to alter the on-off state of designated system components, wherein selection of one or more control objects from said first set denotes said designated system components.

8. The graphical user interface of claim 7, wherein said switch object is associated with a global command that, when executed, sends instructions to alter the on-off state of one or more system components matching a designated component type, wherein selection of a control object from said first set denotes said designated component type.

9. The graphical user interface of claim 7, wherein said switch object is associated with a global command that, when executed, sends an

instruction to alter the on-off state of at least one system component positioned within a designated region within the controlled environment, wherein selection of a control object from said first set denotes said designated region.

10. The graphical user interface of claim 7, further comprising:

exclusion means for exempting from said global command at least one of one or more specified system components, one or more system components matching a specified component type, and one or more system components positioned within a specified region within the controlled environment, wherein execution of said global command does not send instructions to alter the on-off state of the exempted one or more system components.

11. The graphical user interface of claim 1, further comprising:

device definition means for specifying input or output links or dependencies among one or more affiliate system components and a primary system component, and thereby establishing a chain of system components including said primary system component and said one or more affiliate system components, wherein said primary system component is associated with a primary control object from said first set.

12. The graphical user interface of claim 11, wherein activation of said primary control object populates the user interface with control options for executing commands to send instructions to control the operations or functions of said chain of system components.

13. A method of managing a plurality of system components within a controlled environment, comprising:

presenting, on a user interface, a first set of control objects, each object being associated with one or more system components within the controlled environment;

selecting a system component in response to receiving an activation signal associated with a control object from said first set;

populating said user interface with control options for the selected system component; and

associating each control option with a sequence of executable commands that sends instructions to control the operations or functions of the selected system component.

14. The method of claim 13, further comprising:

presenting, on said user interface, a second set of control objects representing affiliate system components capable of providing an input to the selected system component.

15. The method of claim 14, further comprising:

populating said user interface with control options for an affiliate system component in response to activating a control object from said second set; and

associating each control option for said affiliate system component with a sequence of executable commands that sends instructions to control the operations or functions of said affiliate system component.

16. The method of claim 14, further comprising:

populating said user interface with control options to link an affiliate system component to the selected system component and hide said affiliate system component from further view on said user interface.

17. The method of claim 13, wherein said first set of control objects represents a plurality of regions, each region including one or more system components within the controlled environment.

18. The method of claim 17, wherein said selecting step comprises:

selecting a region in response to receiving an activation signal associated with a control object from said first set;

populating said user interface with a second set of control objects to represent available system components within the selected region;
and

selecting the system component in response to receiving an activation signal associated with a control object from said second set.

19. The method of claim 13, wherein said first set of control objects represents a plurality of component types within the controlled environment.

20. The method of claim 19, wherein said selecting step comprises:
selecting a component type in response to receiving an activation signal associated with said first set;

populating the user interface with a second set of control objects to represent available regions, each region including one or more system components of a selected component type within the controlled environment; and

selecting the system component in response to receiving an activation signal associated with said second set.

21. The method of claim 13, further comprising:
selecting one or more control objects from said first set to designate system components;

presenting, on said user interface, a switch object that, when activated, executes a global command for the designated system components;
and

executing said global command to send instructions to alter the on-off state of the designated system components.

22. The method of claim 13, further comprising:

selecting one or more control objects from said first set to designate a component type;

presenting, on said user interface, a switch object that, when activated, executes a global command for one or more system components matching said component type; and

executing said global command to send instructions to alter the on-off state of said one or more system components matching said component type.

23. The method of claim 13, further comprising:

selecting one or more control objects from said first set to designate a region within the controlled environment;

presenting, on said user interface, a switch object that, when activated, executes a global command for one or more system components positioned within said region; and

executing said global command to send instructions to alter the on-off state of said one or more system components positioned within said region.

24. The method of claim 13, further comprising:

selecting one or more control objects from said first set to designate system components;

presenting, on said user interface, a switch object that, when activated, executes a global command for the designated system components;

exempting from said global command at least one of one or more specified system components, one or more system components matching a specified component type, and one or more system components positioned within a specified region within the controlled environment; and

executing said global command to send instructions to alter the on-off state of all designated system components except for the exempted one or more system components.

25. The method of claim 13, further comprising:

specifying input or output links or dependencies among one or more affiliate system components and a primary system component, and thereby establishing a chain of system components including said primary system component and said one or more affiliate system components, wherein said primary system component is associated with a primary control object from said first set.

26. The method of claim 25, wherein activation of said primary control object populates said user interface with control options for executing commands to send instructions to control the operations or functions of said chain of system components.

27. A computer program product comprising a computer useable medium having computer readable program code means embedded in said medium for causing a computer to manage a plurality of system components within a controlled environment, comprising:

first computer readable program code means for presenting, on a user interface, a first set of control objects, each object being associated with one or more system components within the controlled environment;

second computer readable program code means for selecting a system component in response to receiving an activation signal associated with a control object from said first set;

third computer readable program code means for populating said user interface with control options for the selected system component;
and

fourth computer readable program code means for associating each control option with a sequence of executable commands that sends instructions to control the operations or functions of the selected system component.

28. The computer program product according to claim 27, further comprising:

fifth computer readable program code means for presenting, on said user interface, a second set of control objects representing affiliate system components capable of providing an input to the selected system component.

29. The computer program product according to claim 27, wherein said first set of control objects represents a plurality of regions, each region including one or more system components within the controlled environment, further comprising:

fifth computer readable program code means for selecting a region in response to receiving an activation signal associated with a control object from said first set; and

sixth computer readable program code means for populating said user interface with a second set of control objects to represent available system components within the selected region, wherein the selected system component is selected in response to receiving an activation signal associated with a control object from said second set.

30. The computer program product according to claim 27, wherein said first set of control objects represents a plurality of component types within the controlled environment, further comprising:

fifth computer readable program code means for selecting a component type in response to receiving an activation signal associated with said first set; and

sixth computer readable program code means for populating the user interface with a second set of control objects to represent available regions, each region including one or more system components of a selected component type within the controlled environment, wherein the selected system component is selected in response to receiving an activation signal associated with said second set.